

AMENDMENTS TO THE SPECIFICATION:

Amend the specification as follows:

Page 1, after the title, insert the following new paragraph:

The present application is a 371 U.S. national phase of PCT/EP99/09759, filed December 3, 1999, which designated the U.S.

Page 4, after line 13, insert the following new paragraphs:

Description of the Figures

Fig. 1

V3 loop sequence data of HIV-1 patient isolates (PI) (wherein the first listed sequence is SEQ ID NO:13 and subsequent sequences are SEQ ID NOs:14-24).

Fig. 2a

Amino acid sequences of the NL4-3 V2 loop (SEQ ID NO: 25) and NL4-3 V3 loop (SEQ ID NO: 26). The regions which are preferably to be varied are underlined.

Fig. 2b

Variation of the V3 loop (SEQ ID NO:27). Data from the Los Alamos database.

Fig. 4

Schematic representation of the process for the preparation of the mixture of gp 120-expressing plasmid vectors.

- 1.) Preparation of the degenerated DNA fragments for e.g. the V3 loop
 - a.) Synthesis of single-stranded DNA
 - b.) Hybridization of two complementary oligonucleotides.
- 2.) Cloning of the V3 loop DNA fragments into pUC18 delta *env*
- 3.) Cloning of the *env* gene into the gp 120 expression vector pBSCenvATG

V3 loop fragments with degenerated sequence e.g.:

Fig. 5

Heterogeneity of the vaccine using the V3 loop as an example

V3 loop sequence:

Degeneration at protein level:

variants

Degenerated DNA sequence of the respective variable amino acid positions:

SCHREIBER
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variants

Variability at protein level derived from the degenerated DNA sequence:

Detailed Description